



NATIONAL INSTITUTES OF HEALTH

Scientific Directory  
1961  
and  
Annual Bibliography  
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# Foreword

The third edition of the annual directory and bibliography of the National Institutes of Health, like its predecessors, is intended for reference use by research workers in the biomedical sciences inside and outside Government. It presents the broad outlines of NIH structure, names the professional staff, and lists those scientific and technical publications which derive from our program of direct research—laboratory and clinical—at Bethesda, Md., and in the field.

Entries in the volume are arranged by Institute and Division, with the directory and bibliography presented together at the level of the several laboratories or branches within each Institute or Division.

The directory, which reflects both organizational structure and position incumbents, includes the names of all staff members with doctoral degrees as well as those of other key individuals. Also listed are Visiting Scientists with tenure of a year or more. An asterisk before a name identifies the chief of a section.

The bibliography enumerates scientific and technical papers published by the NIH staff during 1960. (Among these are a number of papers omitted from the previous edition.) Alphabetized by senior author, the references are placed under the organizational unit to which that scientist was attached when the work was done. A list of the journals (with their corresponding abbreviations) appearing in the bibliography is included.

To increase the usefulness of this volume, author and subject indexes are provided. The first lists the names of all staff members included in either the directory or the bibliography; in this index the numbers in roman refer to *pages* (directory), and numbers in italic to *titles* (bibliography). The subject index—a new feature for this series—should furnish a better idea of the scope of NIH research as well as a quicker and more convenient reference to major and subordinate areas of research than is possible by a perusal of titles.

It is a pleasure to make this information available to those interested in knowing more about the staff and accomplishments of this institution.

*James A. Shannon*

JAMES A. SHANNON, M.D.,  
Director, National Institutes of Health.



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## Clinical Investigations

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Clarence A. Sooter, Ph. D. (cell biology; anatomy and physiology)  
Marguerite Young, Ph. D. (behavioral and psychological sciences)  
Benjamin Mehlman, Ph. D. (mental health)  
\**Chief, Analysis and Evaluation Section*,  
RALPH SIMON, Ph. D.

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*Assistant Chief*, JOSEPH V. MICHALSKI, Ph. D. (biological sciences)

*Assistant Chief*, (clinical research)——

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## DIVISION OF RESEARCH SERVICES

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**Assistant to the Chief, JOHN L. S. HICKEY**

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DONALD L. SNOW

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NORMAN Z. SHAPIRO, Ph. D.

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\*Alexander Kimler, Ph. D.

Roy F. Kinard, D.V.M.

\*Charles W. McPherson, D.V.M.

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# JOURNALS AND ABBREVIATIONS

M.A. Archives of Dermatology  
M.A. Archives of General Psychiatry  
M.A. Archives of Industrial Health  
M.A. Archives of Internal Medicine  
M.A. Archives of Neurology  
M.A. Archives of Ophthalmology  
M.A. Archives of Pathology  
M.A. Journal of Diseases of Children  
Academy of Medicine of New Jersey Bulletin  
carologia  
cta Anatomica  
cta Chemica Scandinavica  
cta Genetica et Statistica Medica  
cta Genetica Medica et Gemellologica  
cta Pathologica et Microbiologica Scandinavica  
cta; Unio Internationalis Contra Cancrum  
tuelles Neuropsychologiques  
Adult Leadership  
Advances in Biological and Medical Physics  
Advances in Internal Medicine  
American Association of Blood Banks Bulletin  
American Heart Journal  
American Industrial Hygiene Association Journal  
American Journal of Anatomy  
American Journal of Cardiology  
American Journal of Clinical Nutrition  
American Journal of Clinical Pathology  
American Journal of Hospital Pharmacy  
American Journal of Human Genetics  
American Journal of Hygiene  
American Journal of Medicine  
American Journal of Nursing  
American Journal of Obstetrics and Gynecology  
American Journal of Ophthalmology  
American Journal of Orthopsychiatry  
American Journal of Pathology  
American Journal of Physical Anthropology  
American Journal of Physiology  
American Journal of Psychiatry  
American Journal of Psychology  
American Journal of Public Health and the Nation's  
Health  
American Journal of Roentgenology, Radium Therapy  
and Nuclear Medicine  
American Journal of Tropical Medicine and Hygiene  
American Journal of Veterinary Research  
American Psychologist  
American Review of Respiratory Diseases  
American Sociological Review  
Analytical Biochemistry  
Analytical Chemistry  
Anatomical Record

A.M.A. Arch. Derm.  
A.M.A. Arch. Gen. Psychiat.  
A.M.A. Arch. Indust. Health  
A.M.A. Arch. Intern. Med.  
A.M.A. Arch. Neurol.  
A.M.A. Arch. Ophthal.  
A.M.A. Arch. Path.  
A.M.A. J. Dis. Child.  
Acad. Med. N. J. Bull.  
Acarologia  
Acta Anat.  
Acta Chem. Scand.  
Acta Genet.  
Acta Genet. Med.  
Acta Pat. Microbiol. Scand.  
Acta Un. Int. Cancr.  
Actualites Neuropsychol.  
Adult Leadership  
Advances Biol. Med. Phys.  
Advances Intern. Med.  
Amer. Ass. Blood Banks Bull.  
Amer. Heart J.  
Amer. Industr. Hyg. Ass. J.  
Amer. J. Anat.  
Amer. J. Cardiol.  
Amer. J. Clin. Nutr.  
Amer. J. Clin. Path.  
Amer. J. Hosp. Pharm.  
Amer. J. Hum. Genet.  
Amer. J. Hyg.  
Amer. J. Med.  
Amer. J. Nurs.  
Amer. J. Obstet. Gynec.  
Amer. J. Ophthal.  
Amer. J. Orthopsychiat.  
Amer. J. Path.  
Amer. J. Phys. Anthropol.  
Amer. J. Physiol.  
Amer. J. Psychiat.  
Amer. J. Psychol.  
Amer. J. Public Health  
Amer. J. Roentgenol.  
Amer. J. Trop. Med.  
Amer. J. Vet. Res.  
Amer. Psychol.  
Amer. Rev. Resp. Dis.  
Amer. Sociol. Rev.  
Anal. Biochem.  
Anal. Chem.  
Anat. Rec.

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|--|-------------------------------------|
| Anesthesiology .....   | Anesthesiology                      |
| Angiology .....  | Angiology                           |
| Ann. Allergy .....   | Ann. Allergy                        |
| Annals of Allergy .....  | Ann. Ent. Soc. Amer.                |
| Annals of the Entomological Society of America .....                                     | Ann. Intern. Med.                   |
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| Annals of Surgery .....  | Anthropol. Linguist.                |
| Anthropological Linguistics .....  | Antibiot. Chemother.                |
| Antibiotics and Chemotherapy .....   | Arch. Biochem.                      |
| Archives of Biochemistry and Biophysics .....  | Arch. Biochem. Biophys.             |
| or   | A.M.A. Arch. Environ. Health        |
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| Archives Italiennes de Biologie .....  | Arch. Ital. Biol.                   |
| Archives of Neurology .....  | Arch. Neurol.                       |
| Archives of Ophthalmology .....  | Arch. Ophthal.                      |
| Archives of Oral Biology .....   | Arch. Oral Biol.                    |
| Archives de L'Institut Pasteur de Tunis .....  | Arch. Pasteur Inst. Tunis           |
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| Biochemical and Biophysical Research Communications .....                                | Biochem. Biophys. Res. Com-<br>mun. |
| Biochemical Journal .....  | Biochem. J.                         |
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| Biochemische Zeitschrift .....   | Biochem. Z.                         |
| Biochimica et Biophysica Acta .....  | Biochim. Biophys. Acta              |
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| Blood; the Journal of Hematology .....   | Blood                               |
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